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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/599,998	11/29/2006	Shusaku Gotou	P30952	7971

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EXAMINER	
KIM, JAE K	

ART UNIT	PAPER NUMBER
2821	

NOTIFICATION DATE	DELIVERY MODE
06/10/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/599,998	GOTOU ET AL.	
	Examiner	Art Unit	
	JAE K. KIM	2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 April 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13* is/are pending in the application.

4a) Of the above claim(s) *2 and 7* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-6 and 8-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10/17/2009* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This is the 3rd action in the application in response to the correspondence filed on 27 April 2009.

2. Claims 1, 3-6, and 8-13 are pending in the application. Clams 2 and 7 have been cancelled, claims 1, 6 and 11 have been amended, and claim 13 is newly added from the 10 September 2008 correspondence. Claims 1, 6, and 13 are independent claims.

3. Applicant's arguments with respect to current claims from the 27 April 2009 correspondence have been considered and are addressed in the statement of rejection below, necessitated by amendment. Response to arguments follows the statement of rejection.

Priority

4. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). Examiner apologizes for the oversight of PCT/JPO/07413 filed on 18 April 2005.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 3 and 8 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

6. As for claims 3 and 8, these claims are dependent upon independent claims which positively recite the limitation of having a disposed region; however this limitation is, inherently, taken away in dependent claims 3 and 8 and a different limitation put in its place. This is improper and correction is required. To further prosecution, Examiner has rejected the claims as written. Examiner suggests perhaps writing the independent claim without any mention of the disposed region and then the dependent claim which further comprises the disposed region. Examiner underscores that his suggestion is only one possible solution, only if the Applicant is satisfied that the invention is as such properly claimed.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in Graham **v.** John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 1, 3, 5, 6, 8, and 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Otsuka (U.S. Patent 3,755,679) in view of Olschewski (U.S. Pat. 4,142,075).

8. As for claim 1 and 13, Otsuka teaches **a light emitting element having an electric signal terminal, that is driven to emit light by an electric signal given from outside to the electric signal terminal** (Otsuka, Fig. 1) **... a light emitting element driving circuit and a temperature detecting element that are made of a semiconductor** (Otsuka, Fig. 1; Col. 1, Lines 41 - 44)**, the light emitting element driving circuit outputting and applying the electric signal to the electric signal terminal** (Otsuka, Fig. 1; Col. 1, Lines 41 - 46)**, the temperature detecting element detecting an ambient temperature** (Otsuka, Fig. 1; Col. 2, Lines 5 - 9)**, wherein the light emitting element ... is driven based on the temperature detected by the temperature detecting element** (Otsuka, Fig. 1; Col. 1, Lines 41 - 57)**.** Otsuka further teaches **and at least a part of the temperature detecting element is disposed in a light emitting element disposed region, the light emitting element disposed region being a minimum region** (Otsuka, Fig. 2; Col. 2, Lines 45 - 60). However, Otsuka fails to teach specifically that the **light emitting element is mounted on the semiconductor chip,** and that the semiconductor chip includes the driving circuit and the temperature detecting element. Olschewski teaches the **light emitting element is mounted on the semiconductor chip** (Olschewski, Col. 12, Lines 58 -62), and that the semiconductor chip includes the driving circuit and the temperature detecting element (Olschewski, Col. 12, Lines 49 - 55). It would have been obvious to one having ordinary skill in the art to mount the light emitting element on a semiconductor chip for the benefits allowed through modularization. Also, it would have been obvious to one having ordinary skill in the art to use a

semiconductor chip that included the driving circuit and the temperature detecting element for the benefits allowed through miniaturization.

9. As for claim 6, it is similar in scope as claim 1 and therefore is rejected under the similar rationale.

10. As for claim 3, Otsuka and Olschewski teach the above limitations including **wherein the light emitting element driving circuit is formed in the semiconductor** chip. Olschewski further teaches **excluding the light emitting element disposed region** (Olschewski, Fig. 6) from the light emitting driving circuit. The definition given by the applicant in the specification states that the light emitting element disposed region is a minimum region including the light emitting element light projection. Therefore, the claim is requiring the separation of the light emitting element light projection and the light emitting element driving circuit. Olschewski teaches the exclusion of the light from the rest of the circuit via a compartment where the led is located. In addition, this exclusion could have been done by the mere arrangement of parts. This would have been obvious to one of ordinary skill in the art at the time of the invention, since it has been held that rearranging parts of an invention involves only routine skill in the art. It would have been obvious to one having ordinary skill in the art at the time of the invention to combine for the reasons mentioned above. The claim language **for driving the light emitting element** is considered intended use. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed

structural limitations. Therefore, **for driving the light emitting element** is given little patentable weight.

11. As for claim 8, it is similar in scope as claim 3 and therefore is rejected under the similar rationale.

12. As for claim 5, Otsuka and Olschewski teach the above limitations, but does not teach specifically **a plurality of light emitting devices according to claim 1**. It would have been obvious to one having ordinary skill in the art at the time of the invention to take the apparatus covered in Otsuka and Olschewski and have **a plurality of light emitting devices according to claim 1**, since it has been held that a mere duplication of essential working parts involves only routine skill in the art.

13. As for claim 10, Otsuka and Olschewski teach the above limitations, but do not specifically teach **the semiconductor chip ceases to drive or deactivate the light emitting element at a predetermined temperature**. Examiner asserts that this limitation is well known and practiced in the art. It would have been obvious to one of ordinary skill in the art at the time of the invention to have a shut off feature in order to protect the light source and surrounding circuitry.

14. As for claim 11, Otsuka and Olschewski teach the above limitations, but do not specifically teach **the wherein the temperature detecting device is indirectly connected to the light emitting device**. It would have been obvious to one of ordinary skill in the art at the time of the invention where the temperature detecting device and the light emitting device are indirectly connected, since it has been held that the rearrangement of parts of an invention only involves routine skill in the art.

15. As for claim 12, Otsuka and Olschewski teach the above limitations, and Otsuka further teaches **wherein the temperature detecting element detects the temperature of the light emitting element** (Otsuka, Fig. 1; Col. 2, Lines 5 - 9). It would have been obvious to combine for the already mentioned reasons above.

16. Claims 4 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Otsuka in view of Olschewski and in further view of Blalock (U.S. Patent 6,344,641).

17. As for claim 4, Otsuka and Olschewski teach the limitations above, however Otsuka does not specifically teach **wherein the light emitting element is a plurality of visible light emitting elements that emit light at different wavelengths, and the semiconductor chip for driving the light emitting element drives the light emitting elements individually to maintain white balance of the plurality of light emitting elements based on the temperature detected by the temperature detecting element.** Otsuka talks of the ability to use different wavelengths or colors (Otsuka, Col. 3, Lines 31 - 55). Also, it would have been obvious to one having ordinary skill in the art at the time of the invention to use multiple LED apparatus described in Otsuka, since it has been held that a mere duplication of essential working parts involves only routine skill in the art. Blalock teaches **wherein the light emitting element is a plurality of visible light emitting elements that emit light at different wavelengths, and the semiconductor chip for driving the light emitting element drives the light emitting elements individually to maintain white balance of the plurality of light emitting elements based on the temperature detected by the temperature detecting**

element (Blalock, Col. 3, Line 62 – Col. 4, Line 21). It would have been obvious to one having ordinary skill in the art at the time of the invention to combine Otsuka with Blalock as controlling the LED operation via temperature determination of LEDs, since temperature variation in each LED will cause problems in maintaining the white balance in an RGB system. Also, the claim language **for driving the light emitting element** is considered intended use. It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. Therefore, **for driving the light emitting element** is given little patentable weight.

18. As for claim 9, it is similar in scope as claim 4 and therefore is rejected under the similar rationale.

Response to Arguments

19. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). Examiner apologizes for the oversight of PCT/JPO/07413 filed on 18 April 2005.

20. Examiner acknowledges the cancellation of claim 11 and withdraws the previous U.S.C. 112 rejection to claim 11.

21. Examiner acknowledges the cancellation of claim 2 and withdraws the previous U.S.C. 112 rejection to claim 2.

22. Applicant's arguments in relation to the rejections made under 35 U.S.C. § 103 have been fully considered, but they are not persuasive.

23. With regards to the Applicant's argument that the previous Office Action fails to establish obviousness, Examiner disagrees. The motivation to put all components on a single chip for compactness and miniaturization is well documented and practiced, including the practice of engineering a light emitting element on a wafer in conjunction with other elements. Rearranging those parts on the wafer for the aspects of electronic packaging engineering is also well established in the art. Further, Otsuka clearly details optical temperature feedback and based on the light and heat produced by an LED, and the prior art clearly reads on the claims as written.

24. As for claims 3, 4, 5, 8, and 9 Applicant's argument that these claims are now allowable given allowable independent claims, this argument is moot given the statement of rejection above. Further, claims 3 and 8 are subject to U.S.C. 112 rejections. Further, regarding Applicant's argument that the prior art fails to teach a light emitting element disposed region, Examiner asserts that every light emitting element inherently has a "light emitting disposed region" and the limitation of minimum is broad, as is the positional relation aspect of the instant invention's claims.

25. As for Applicant's arguments with regard to Blalock, Examiner directs Applicant to the already discussed portion above and the statement of rejection above, particularly claim 1 and Otsuka.

26. As for Applicant's argument with regards to claim 13, Examiner directs Applicant to the statement of rejection above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAE K. KIM whose telephone number is (571)270-5066. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas Owens can be reached on (571) 272-1662. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JKK
/JAE K KIM/

Examiner, Art Unit 2821

/Douglas W Owens/
Supervisory Patent Examiner, Art Unit 2821
June 5, 2009